

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) An electrosurgical system including a generator for generating radio frequency (RF) power, and an electrosurgical instrument including at least two electrodes, and an identification element carried by the instrument and being representative of at least the number of electrodes present on the instrument,
the generator comprising:
 - (i) an RF output stage having at least a pair of RF output lines,
 - (ii) a power supply coupled to the output stage for supplying power to the output stage,
 - (iii) a controller capable of varying an RF signal supplied to the RF output lines, so as to be capable of supplying either a cutting RF waveform or a coagulating RF waveform, and
 - (iv) a switching circuit having at least three output connections, at least two being in electrical connection with respective ones of the at least two electrodes, and
 - (v) a sensing circuit adapted to sense the identification element carried by the instrument, the ~~the~~ switching circuit being operated to connect the RF output lines to two or more of the at least three output connections, depending on the particular identification element carried by the instrument,wherein the controller is arranged such that, when the identification element indicates that the electrosurgical instrument includes at least three electrodes, the switching circuit is operated to supply the cutting RF waveform between a first pair of the electrosurgical instrument's electrodes and the coagulating RF waveform between a second pair of the electrosurgical instrument's electrodes, but where the identification element indicates that the electrosurgical instrument includes only two electrodes, the switching circuit is operated to supply both the cutting RF waveform and the coagulating RF waveform to the same pair of electrodes.

2. (Original) A system according to claim 1 wherein the identification element is a resistor and the sensing circuit is adapted to sense the resistance of the identification element.
3. (Original) A system according to claim 1 wherein the identification element is a capacitor and the sensing circuit is adapted to sense the capacitance of the identification element.
4. (Original) A system according to claim 3 wherein the sensing circuit includes an inductor such as to form a resonant circuit with the identification element, the sensing circuit being adapted to determine the resonant frequency of the resonant circuit so as to identify the identification element.
5. (Original) A system according to claim 1, wherein the controller automatically adjusts the radio frequency power supplied to at least one of the three or more output connections to limit the peak generator output voltage to at least a first value when a first combination of electrodes is selected by the switching circuit, and to at least a second value when a second combination of electrodes is selected by the switching circuit.
6. (Withdrawn) A system according to claim 1, wherein two of the three or more electrodes are in the form of jaws adapted to grasp tissue therebetween.
7. (Withdrawn) A system according to claim 6, wherein the third electrode is mounted on one of the jaws, separated therefrom by an insulating member.
8. (Withdrawn) A system according to claim 7, wherein the third electrode is mounted on an external face of one of the jaws.
9. (Withdrawn) A system according to claim 7, wherein the third electrode is mounted on an internal face of one of the jaws.

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10. (Withdrawn) A system according to claim 7, wherein the third electrode is mounted at the tip of one of the jaws.

11. (Original) A system according to claim 1, wherein at least one of the electrodes is in the form of a hook.

12. (Currently Amended) An electrosurgical system including a generator for generating radio frequency (RF) power, and an electrosurgical instrument including at least two electrodes, and an identification element carried by the instrument and being representative of at least the number of electrodes present on the instrument, the generator comprising:

- (i) an RF output stage having at least a pair of RF output lines,
 - (ii) a power supply coupled to the output stage for supplying power to the output stage,
 - (iii) a controller capable of varying an RF signal supplied to the RF output lines, so as to be capable of supplying either a cutting RF waveform or a coagulating RF waveform, and
 - (iv) a switching circuit having at least three output connections, at least two being in electrical connection with a respective one of the at least two electrodes, and
 - (v) a sensing circuit adapted to sense the identification element carried by the instrument, the switching circuit being operated to connect the RF output lines to two or more of the at least three output connections, depending on the particular identification element carried by the instrument, so as to supply the cutting RF waveform between a first pair of the instrument's electrodes and the coagulating RF waveform between a second pair of the instrument's electrodes when the identification element indicates that the electrosurgical instrument includes at least three electrodes, and to supply both the cutting RF waveform and the coagulating RF waveform to the same pair of the instrument's electrodes where the identification element indicates that the electrosurgical instrument includes only two electrodes, and
- wherein at least one of the electrodes being in the form of a hook, at least one hook electrode extending distally beyond the other electrodes.

13. (Original) A system according to claim 12, wherein there is a centrally positioned electrode extending distally beyond the other electrodes.
14. (Original) A system according to claim 11, wherein at least three of the electrodes are in the form of a hook.
15. (Currently Amended) An electrosurgical system including a generator for generating radio frequency (RF) power, and an electrosurgical instrument including at least two electrodes, and an identification element carried by the instrument and being representative of at least the number of electrodes present on the instrument, the generator comprising:
- (i) an RF output stage having at least a pair of RF output lines,
 - (ii) a power supply coupled to the output stage for supplying power to the output stage,
 - (iii) a controller capable of varying an RF signal supplied to the RF output lines, so as to be capable of supplying either a cutting RF waveform or a coagulating RF waveform, and
 - (iv) a switching circuit having at least three output connections, at least two being in electrical connection with a respective one of the at least two electrodes, and
 - (v) a sensing circuit adapted to sense the identification element carried by the instrument, the switching circuit being operated to connect the RF output lines to two or more of the at least three output connections, depending on the particular identification element carried by the instrument, so as to supply the cutting RF waveform between a first pair of the instrument's electrodes and the coagulating RF waveform between a second pair of the instrument's electrodes when the identification element indicates that the electrosurgical instrument includes at least three electrodes, and to supply both the cutting RF waveform and the coagulating RF waveform to the same pair of the instrument's electrodes where the identification element indicates that the electrosurgical instrument includes only two electrodes, and
- wherein at least one of the electrodes is longitudinally movable such that it can be extended and retracted with respect to the other electrodes.

16. (Original) A system according to claim 15, wherein the longitudinally movable electrode is positioned centrally between the other electrodes.

17. (Currently Amended) An electrosurgical system including a generator for generating radio frequency (RF) power, and a plurality of electrosurgical instruments, the plurality of electrosurgical instruments including at least one electrosurgical instrument having two electrodes, and at least one electrosurgical instrument having at least three electrodes, each of the plurality of electrosurgical instruments having an identification element carried by the instrument and being representative of at least the number of electrodes present on the instrument, the generator comprising:

- (i) an RF output stage having at least a pair of RF output lines,
- (ii) a power supply coupled to the output stage for supplying power to the output stage,
- (iii) a controller capable of varying an RF signal supplied to the RF output lines, and
- (iv) a switching circuit having at least three output connections, so as to be capable of supplying either a cutting RF waveform or a coagulating RF waveform, and
- (v) a sensing circuit adapted to sense the identification element carried by the instruments,

the ~~the~~ switching circuit being operated, such that when the sensing circuit senses an identification element indicating an electrosurgical instrument having two electrodes, the switching circuit is set to a first mode of operation to supply both the cutting RF waveform and the coagulating RF waveform to the same pair of the instrument's electrodes, and when the sensing circuit senses an identification element indicating an electrosurgical instrument having at least three electrodes, the switching circuit is set to a second mode of operation to supply the cutting RF waveform between a first pair of the instrument's electrodes and the coagulating RF waveform between a second pair of the instrument's electrodes.

18. (Previously Presented) A system according to claim 1, wherein at least two of the switching circuit's output connections are electrically connected to one another.

19. (New) A system according to claim 1, wherein the first pair of electrodes includes an electrode that is also included in the second pair of electrodes.

20. (New) A system according to claim 17, wherein the first pair of electrodes includes an electrode that is also included in the second pair of electrodes.

21. (New) An electrosurgical system comprising:
an electrosurgical instrument including at least two electrodes and using radio frequency (RF) power to operate,
an identification element carried by the electrosurgical instrument that is representative of at least the number of electrodes present on the instrument,
a power supply for supplying an RF signal that is either a cutting RF waveform or a coagulating RF waveform,
an RF output stage coupled to the power supply and having at least a pair of RF output lines,
a controller capable of varying the RF signal supplied to the RF output lines, so as to be capable of supplying either the cutting RF waveform or the coagulating RF waveform,
a switching circuit having at least three output connections, at least two being in electrical connection with respective ones of the at least two electrodes, and
a sensing circuit adapted to sense the identification element carried by the instrument,
the switching circuit being operated to connect the RF output lines to two or more of the at least three output connections, depending on the particular identification element carried by the instrument,
wherein the controller is arranged such that, when the identification element senses that the electrosurgical instrument includes at least three electrodes, the switching circuit is operated to supply the cutting RF waveform between a first pair of the instrument's electrodes, and the coagulating RF waveform is supplied between a second pair of the instrument's electrodes, but when the identification element senses that the electrosurgical instrument includes only two

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electrodes, the switching circuit is operated to supply both the cutting RF waveform and the coagulating RF waveform to the same pair of the instrument's electrodes.

22. (New) A system according to claim 21, wherein the first pair of electrodes includes an electrode that is also included in the second pair of electrodes.